

# **FCC Test Report**

Report No.: AGC02762250509FR01

FCC ID : 2BPSJ-ZHINAI

**APPLICATION PURPOSE**: Original Equipment

**PRODUCT DESIGNATION**: Smart Bidet Toilet Seat Remote Control

**BRAND NAME** : WLJBIDET

WLJ-080KL, WLJ-080KR, WLJ-070L, WLJ-070R,

MODEL NAME : WLJ-U90L, WLJ-U90R, XCQQ-S90L, XCQQ-S90R,

XCQQ-V90L, XCQQ-V90R, XCQQ-F16, XCQQ-V9L, WLJ-S7,

WLJ-O50ML, WLJ-O50MR, WLJ-V40SL, WLJ-V40SR

**APPLICANT**: Hangzhou Zhinai Sanitary Ware Co., Ltd.

**DATE OF ISSUE** : Jun. 13, 2025

**STANDARD(S)** : FCC Part 15 Subpart C §15.231

**REPORT VERSION**: V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



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# **Report Revise Record**

| Report Version | Revise Time | Issued Date   | Valid Version | Notes           |
|----------------|-------------|---------------|---------------|-----------------|
| V1.0           | /           | Jun. 13, 2025 | Valid         | Initial Release |



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# 1. General Information

| Applicant                    | Hangzhou Zhinai Sanitary Ware Co., Ltd.   |  |
|------------------------------|---|--|
| Address                      | K02-1, Jinjiadunan Road #4, Yuhang, Hangzhou, Zhejiang, 311100  |  |
| Manufacturer                 | Hangzhou Zhinai Sanitary Ware Co., Ltd.   |  |
| Address                      | K02-1, Jinjiadunan Road #4, Yuhang, Hangzhou, Zhejiang, 311100  |  |
| Factory                      | Hangzhou Zhinai Sanitary Ware Co., Ltd.   |  |
| Address                      | K02-1, Jinjiadunan Road #4, Yuhang, Hangzhou, Zhejiang, 311100  |  |
| Product Designation          | Smart Bidet Toilet Seat Remote Control  |  |
| Brand Name                   | WLJBIDET  |  |
| Test Model                   | WLJ-O80KL   |  |
| Series Model(s)              | WLJ-O80KR, WLJ-O70L, WLJ-O70R, WLJ-U90L, WLJ-U90R, XCQQ-S90L, XCQQ-S90R, XCQQ-V90L, XCQQ-V90R, XCQQ-F16, XCQQ-V9L, WLJ-S7, WLJ-O50ML, WLJ-O50MR, WLJ-V40SL, WLJ-V40SR |  |
| Difference Description       | All the same except of the model name.  |  |
| Date of receipt of test item | May 27, 2025  |  |
| Date of Test                 | May 27, 2025- Jun.13, 2025  |  |
| Deviation from Standard      | No any deviation from the test method   |  |
| Condition of Test Sample     | Normal  |  |
| Test Result                  | Pass  |  |
| Test Report Form No          | AGCER-FCC-SRD1-V1   |  |

Note: The test results of this report relate only to the tested sample identified in this report.

| Prepared By | Jouk bai                          |              |
|-------------|-----------------------------------|--------------|
|             | Jack Gui<br>(Project Engineer)    | Jun.13, 2025 |
| Reviewed By | Bibo zhang                        |              |
|             | Bibo Zhang<br>(Reviewer)          | Jun.13, 2025 |
| Approved By | Angole li                         |              |
| -           | Angela Li<br>(Authorized Officer) | Jun.13, 2025 |



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#### 2. Product Information

# 2.1 Product Technical Description

| Operation Frequency           | 433.92MHz                                |
|-------------------------------|--|
| Hardware Version              | V1.0                                     |
| Software Version              | V1.0                                     |
| Modulation Type               | ASK                                      |
| Number of channels            | 1  |
| Field Strength of Fundamental | 95.12dBuV/m(PK)@3m<br>68.32dBuV/m(AV)@3m |
| Antenna Designation           | PCB Antenna                              |
| Antenna Gain                  | 1dBi                                     |
| Power Supply                  | DC 3V (alkaline dry battery AAA*2)       |

#### 2.2 Test Frequency List

| Frequency Band Channel Number |    | Test Frequency |  |
|-------------------------------|----|----------------|--|
|                               | 01 | 433.92 MHz     |  |

Note: According to manufacturer's requirements, periodic operation in the band 40.66-40.70 MHz and above 70MHz



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#### 2.3 Related Submittal(S) / Grant (S)

This submittal(s) (test report) is intended for **FCC ID: 2BPSJ-ZHINAI**, filing to comply with Part 2, Part 15 of the Federal Communication Commission rules.

#### 2.4 Test Methodology

The tests were performed according to following standards:

| No. | Identity Document Title  |  |  |  |  |
|-----|--|--|--|--|--|
| 1   | 1 FCC 47 CFR Part 2 Frequency allocations and radio treaty matters; general rules and regulation |  |  |  |  |
| 2   | FCC 47 CFR Part 15   | Radio Frequency Devices  |  |  |  |
| 3   | ANSI C63.10-2013   | American National Standard for Testing Unlicensed Wireless Devices |  |  |  |

#### 2.5 Special Accessories

Not available for this EUT intended for grant.

#### 2.6 Equipment Modifications

Not available for this EUT intended for grant.

#### 2.7 Antenna Requirement

# **Standard Requirement**

#### 15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

#### **EUT Antenna:**

The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna is 1dBi.



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#### 3. Test Environment

# 3.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

#### 3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

#### CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

#### A2LA-Lab Cert. No.: 5054.02

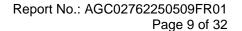
Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

#### FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

#### IC-Registration No.: 24842(CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.





#### 3.3 Environmental Conditions

|                         | Normal Conditions |  |  |
|-------------------------|-------------------|--|--|
| Temperature range (℃)   | 15 - 35           |  |  |
| Relative humidity range | 20 % - 75 %       |  |  |
| Pressure range (kPa)    | 86 - 106          |  |  |
| Power supply            | DC 3V by battery  |  |  |

#### 3.4 Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

| Item  | Measurement Uncertainty    |  |  |
|---|----------------------------|--|--|
| Uncertainty of Conducted Emission for AC Port | $U_c = \pm 3.1 \text{ dB}$ |  |  |
| Uncertainty of Radiated Emission below 150kHz | $U_c = \pm 4.2 \text{ dB}$ |  |  |
| Uncertainty of Radiated Emission below 30MHz  | $U_c = \pm 3.8 \text{ dB}$ |  |  |
| Uncertainty of Radiated Emission below 1GHz   | $U_c = \pm 4.0 \text{ dB}$ |  |  |
| Uncertainty of total RF power, conducted      | $U_c = \pm 0.8 \text{ dB}$ |  |  |
| Uncertainty of RF power density, conducted    | $U_c = \pm 2.6 \text{ dB}$ |  |  |
| Uncertainty of spurious emissions, conducted  | $U_c = \pm 2 \%$           |  |  |
| Uncertainty of Occupied Channel Bandwidth     | $U_c = \pm 2.7 \%$         |  |  |
| Uncertainty of Dwell Timee                    | U <sub>c</sub> =+0.2 %     |  |  |



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# 3.5 List of Equipment Used

| •           | Radiated Spurious Emission |                                  |               |               |            |                              |                              |
|-------------|----------------------------|----------------------------------|---------------|---------------|------------|------------------------------|------------------------------|
| Used        | Equipment No.              | Test Equipment                   | Manufacturer  | Model No.     | Serial No. | Last Cal. Date<br>(YY-MM-DD) | Next Cal. Date<br>(YY-MM-DD) |
|             | AGC-EM-E046                | EMI Test Receiver                | R&S           | ESCI          | 10096      | 2025-01-31                   | 2026-01-30                   |
| $\boxtimes$ | AGC-EM-E116                | EMI Test Receiver                | R&S           | ESCI          | 100034     | 2025-05-08                   | 2026-05-07                   |
| $\boxtimes$ | AGC-EM-E061                | Spectrum Analyzer                | Agilent       | N9010A        | MY53470504 | 2025-05-08                   | 2026-05-07                   |
| $\boxtimes$ | AGC-EM-E086                | Loop Antenna                     | ZHINAN        | ZN30900C      | 18051      | 2024-03-05                   | 2026-03-04                   |
|             | AGC-EM-E001                | Wideband Antenna                 | SCHWARZBECK   | VULB9168      | D69250     | 2025-03-14                   | 2027-03-13                   |
| $\boxtimes$ | AGC-EM-E029                | Broadband Ridged<br>Horn Antenna | ETS           | 3117          | 00034609   | 2025-03-27                   | 2026-03-26                   |
| $\boxtimes$ | AGC-EM-E082                | Horn Antenna                     | SCHWARZBECK   | BBHA 9170     | #768       | 2023-09-24                   | 2025-09-23                   |
| $\boxtimes$ | AGC-EM-E146                | Pre-amplifier                    | ETS           | 3117-PA       | 00246148   | 2024-07-24                   | 2026-07-23                   |
|             | AGC-EM-A119                | 2.4G Filter                      | SongYi        | N/A           | N/A        | 2025-05-16                   | 2026-05-15                   |
| $\boxtimes$ | AGC-ER-A007                | 6dB Fixed Attenuator             | Mini circuits | BW-S6-2W263A+ | N/A        | 2025-01-30                   | 2026-01-29                   |

| <ul><li>A</li></ul>  | AC Power Line Conducted Emission |                   |           |            |         |            |                              |  |
|--|----------------------------------|-------------------|-----------|------------|---------|------------|------------------------------|--|
| Illsed   Fauinment No.   Test Fauinment   Manufacturer   Model No.   Serial No.   Est Eduinment   Model No.   Serial N |                                  |                   |           |            |         |            | Next Cal. Date<br>(YY-MM-DD) |  |
|  | AGC-EM-E045                      | EMI Test Receiver | R&S       | ESPI       | 101206  | 2024-05-28 | 2025-05-27                   |  |
|  | AGC-EM-A130                      | 6dB Attenuator    | Eeatsheep | LM-XX-6-5W | DC-6GZ  | 2023-06-09 | 2025-06-08                   |  |
|  | AGC-EM-E023                      | AMN               | R&S       | 100086     | ESH2-Z5 | 2024-05-28 | 2025-05-27                   |  |

| • Te        | ● Test Software |                     |              |                                 |                     |  |  |
|-------------|-----------------|---------------------|--------------|---------------------------------|---------------------|--|--|
| Used        | Equipment No.   | Test Equipment      | Manufacturer | Model No.                       | Version Information |  |  |
|             | AGC-EM-S001     | CE Test System      | R&S          | ES-K1                           | V1.71               |  |  |
|             | AGC-EM-S003     | RE Test System      | FARA         | EZ-EMC                          | V.RA-03A            |  |  |
| $\boxtimes$ | AGC-EM-S004     | RE Test System      | Tonscend     | TS <sup>+</sup> Ver2.1(JS32-RE) | 4.0.0.0             |  |  |
|             | AGC-ER-S012     | BT/WIFI Test System | Tonscend     | JS1120-2                        | 2.6                 |  |  |
|             | AGC-EM-S011     | RSE Test System     | Tonscend     | TS+-Ver2.1(JS36-RSE)            | 4.0.0.0             |  |  |



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# 4. System Test Configuration

#### 4.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

#### 4.2 EUT Exercise

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

### 4.3 Configuration of Tested System

| Radiate | d Emission Configu | re: |
|---------|--------------------|-----|
|         | EUT                |     |
|         |                    |     |

#### 4.4 Equipment Used in Tested System

The following peripheral devices and interface cables were connected during the measurement:

☐ Test Accessories Come From The Laboratory

| No. | Equipment | Model No. | Manufacturer | Specification Information | Cable |
|-----|-----------|-----------|--------------|---------------------------|-------|
| 1   |           |           | -            |                           |       |

Test Accessories Come From The Manufacturer

| No. | Equipment | Model No. | Manufacturer | Specification Information | Cable |
|-----|-----------|-----------|--------------|---------------------------|-------|
| 1   |           |           |              |                           |       |



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#### 4.5 Summary of Test Results

| Item | FCC Rules  | Description of Test               | Result |
|------|------------|-----------------------------------|--------|
| 1    | §15.203    | Antenna Equipment                 | Pass   |
| 2    | §15.231(a) | Provision for Momentary Operation | Pass   |
| 3    | §15.231    | Field Strength of Fundamental     | Pass   |
| 4    | §15.209    | Radiated Emission                 | Pass   |
| 5    | §15.205(a) | Restricted Bands of Operation     | Pass   |
| 6    | §15.231(c) | -20dB Bandwidth                   | Pass   |
| 7    | §15.207    | AC Power Line Conducted Emission  | N/A    |

Note: 1.N/A means not applicable

Note: 2. The device under test is battery-powered and does not require evaluation of AC Power Line Conducted Emission.



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# 5. Description of Test Modes

| Summary table of Test Cases        |  |  |  |  |  |
|------------------------------------|--|--|--|--|--|
| Test Item                          | Equipment Type / Modulation                        |  |  |  |  |
| iest item                          | Short Range Wireless Device/ ASK                   |  |  |  |  |
| Radiated & Conducted<br>Test Cases | Mode 1: Normal Transmission Operation at 433.92MHz |  |  |  |  |
| AC Conducted Emission              | Not Applicable                                     |  |  |  |  |

#### Note:

- 1. Only the result of the worst case was recorded in the report, if no other cases.
- 2. The battery is full-charged during the test.
- 3. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- 4. For Conducted Test method, a temporary antenna connector is provided by the manufacture.





# 6. Provision for Momentary Operation

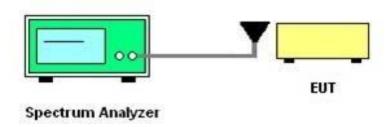
# **6.1 Provisions Applicable**

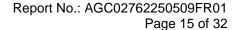
| $\boxtimes$ | (1) | A manually operated transmitter shall employ a switch that will automatically deactivate the            |
|-------------|-----|---|
|             |     | transmitter within not more than 5 seconds of being released.   |
|             | (2) | A transmitter activated automatically shall cease transmission within 5 seconds after activation.       |
|             | (3) | Periodic transmissions at regular predetermined intervals are not permitted.                            |
|             |     | However, polling or supervision transmissions, including data, to determine system integrity of         |
|             |     | transmitters used in security or safety applications are allowed if the total duration of transmissions |
|             |     | does not exceed more than two seconds per hour for each transmitter. There is no limit on the           |
|             |     | number of individual transmissions, provided the total transmission time does not exceed two            |
|             |     | seconds per hour.   |
|             | (4) | Intentional radiators which are employed for radio control purposes during emergencies                  |
|             |     | involving fire, security, and safety of life, when activated to signal an alarm, may operate during the |
|             |     | pendency of the alarm condition.  |
|             | (5) | Transmission of set-up information for security systems may exceed the transmission duration            |
|             |     | limits in (1) and (2) above, provided such transmission are under the control of a professional         |
|             |     | installer and do not exceed ten seconds after a manually operated switch is released or a transmitter   |
|             |     | is activated automatically. Such set-up information may include data.                                   |
|             |     |   |

#### **6.2 Measurement Procedure**

- 1. Set the parameters of SPA as below:
- 2. Centre frequency = Operation Frequency
- 3. RBW=1MHz, VBW=3MHz Span: 0Hz Sweep time: 10S
- 4. Set the EUT to transmit by manually operated. Use the "View" function of SPA to find the transmission time of being released.
- 5. Record the data and Reported.

# 6.3 Measurement Setup (Block Diagram of Configuration)



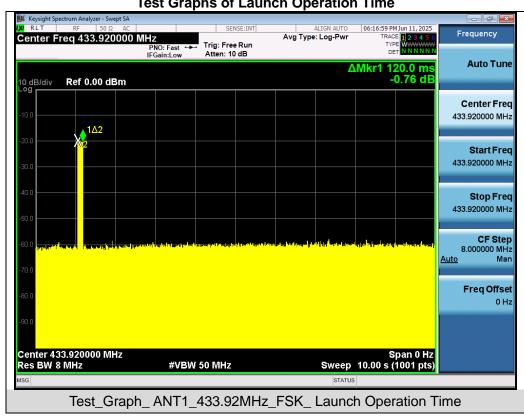




#### 6.4 Measurement Result

| Test Mode | Test Channel<br>(MHz) | Measure launch time<br>(s) | Limits | Pass or Fail |
|-----------|-----------------------|----------------------------|--------|--------------|
| FSK       | 433.92                | 0.12                       | 5s     | Pass         |

**Test Graphs of Launch Operation Time** 





# 7. Duty Cycle of Correction Factor

#### 7.1 Provisions Applicable

According to FCC Part 15.231 (b)(2) and 15.35 (c), For pulse operation transmitter, the averaging pulsed emissions are calculated by peak value of measured emission plus duty cycle factor.

#### 7.2 Measurement Procedure

After the antenna of the EUT is connected, the output signal of the EUT is received by the connected test antenna

To the spectrum analyzer. Set the center frequency to the actual working frequency of the EUT, and then set the spectrum analyzer to Zero Span for

Release time reading. During the test, the switch is released and the EUT is automatically closed

1. Set the parameters of SPA as below:

Centre frequency = Operation Frequency

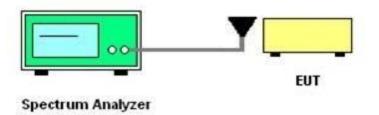
RBW=8MHz, VBW=50MHz

Span: 0Hz

Sweep time: more than two pulse trains or more than each type of pulse occupancy time

- 2. Set the EUT to transmit by manually operated. Use the "Delta mark" function of SPA to find the period time between two pulse trains and each type of pulse occupancy time.
- 3. Record the plots and Reported.

# 7.3 Measurement Setup (Block Diagram of Configuration)



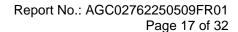
#### 7.4 Measurement Result

| Type of Pules | Width of Pules<br>(ms) | Quantity of Pules (pcs) | Transmission Time (ms) | Total Time (Ton)<br>(ms) |
|---------------|------------------------|-------------------------|------------------------|--------------------------|
| Pules 1       | 0.4                    | 22                      | 8.8                    | 12.4                     |
| Pules 2       | 1.2                    | 3                       | 3.6                    | 12.4                     |

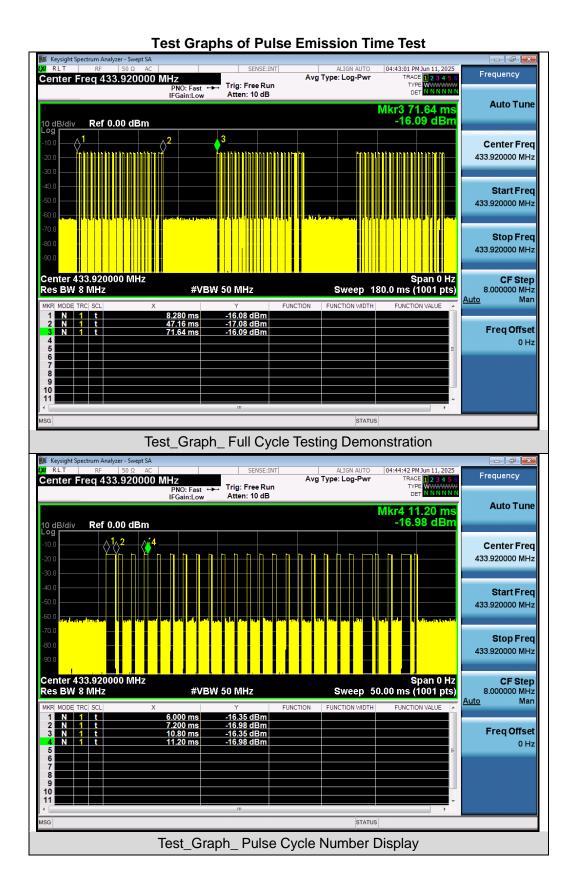
| Test Period (Tp) | Total Time (Ton) | Duty Cycle | Duty Cycle Correction Factor |
|------------------|------------------|------------|------------------------------|
| (ms)             | (ms)             | (%)        | (dB)                         |
| 63.36            | 12.4             | 19.57      | -14.17                       |

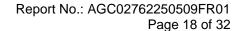
Note 1: Duty Cycle Factor=20 log (Duty Cycle) =-14.17

Note 2: The maximum reference value of the test cycle is 100ms.

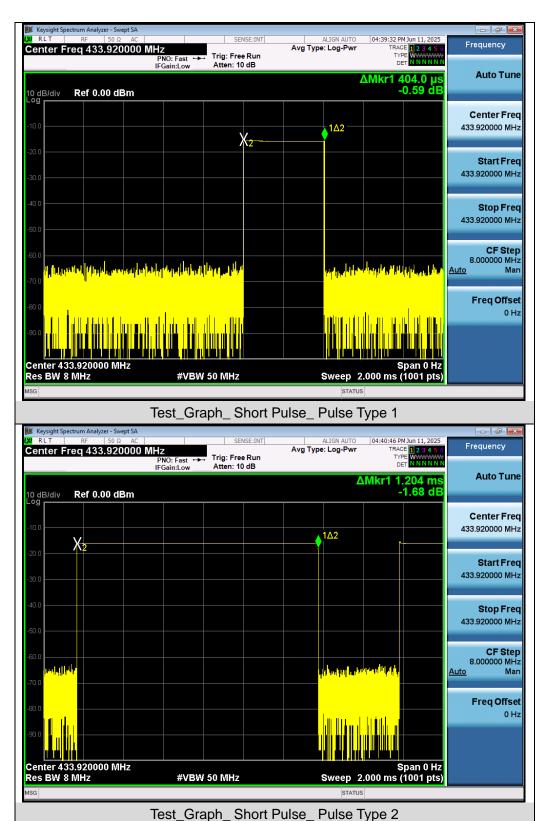












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# 8. Field Strength of Fundamental and Radiated Emission

# 8.1 Provisions Applicable

15.209 Limit in the below table has to be followed:

| Frequency     | Distance<br>Meters | Field Strengths Limit                           |        |  |
|---------------|--------------------|---|--------|--|
| (MHz)         |                    | μV/m  | dBμV/m |  |
| 0.009 ~ 0.490 | 300                | 2400/F(kHz)                                     |        |  |
| 0.490 ~ 1.705 | 30                 | 24000/F(kHz)                                    |        |  |
| 1.705 ~ 30    | 30                 | 30  |        |  |
| 30 ~ 88       | 3                  | 100   | 40.0   |  |
| 88 ~ 216      | 3                  | 150   | 43.5   |  |
| 216 ~ 960     | 3                  | 200   | 46.0   |  |
| 960 ~ 1000    | 3                  | 500   | 54.0   |  |
| Above 1000    | 3                  | 74.0 dB(μV)/m (Peak)<br>54.0 dB(μV)/m (Average) |        |  |

#### Remark:

- 1) Emission level dB $\mu$ V = 20 log Emission level  $\mu$ V/m
- 2) The smaller limit shall apply at the cross point between two frequency bands
- 3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

Note: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.

15.231(b) Limit in the below table has to be followed:

| Fundamental Frequency | Field Strength of Fundamental (microvolts/meter) | Field Strength of Harmonics (microvolts/meter) |
|-----------------------|--|--|
| 40.66-40.70MHz        | 2250   | 225  |
| 70-130MHz             | 1250   | 125  |
| 130-174MHz            | 1250 to 3750                                     | 125 to 375                                     |
| 174-260MHz            | 3750   | 375  |
| 260-470MHz            | 3750 to 12500                                    | 375 to 1250                                    |
| Above 470MHz          | 12500  | 1250   |



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15.231(e) Limit in the below table has to be followed:

| Fundamental Frequency | Field Strength of Fundamental (microvolts/meter) | Field Strength of Harmonics (microvolts/meter) |  |  |
|-----------------------|--|--|--|--|
| 40.66-40.70MHz        | 1,000  | 100  |  |  |
| 70-130MHz             | 500  | 50   |  |  |
| 130-174MHz            | 500 to 1,500                                     | 50 to 150                                      |  |  |
| 174-260MHz            | 1,500  | 150  |  |  |
| 260-470MHz            | 1,500 to 5,000                                   | 150 to 500                                     |  |  |
| Above 470MHz          | 5,000  | 500  |  |  |

#### **8.2 Measurement Procedure**

- The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.



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9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

The following table is the setting of spectrum analyzer and receiver.

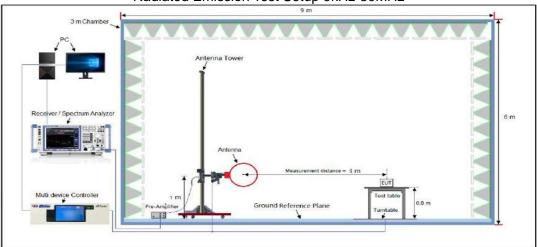
| Spectrum Parameter    | Test Setting                              |  |  |  |
|-----------------------|---|--|--|--|
| Start ~Stop Frequency | 9KHz~150KHz/RB 200Hz for QP               |  |  |  |
| Start ~Stop Frequency | 150KHz~30MHz/RB 9KHz for QP               |  |  |  |
| Start ~Stop Frequency | 30MHz~1000MHz/RB 120KHz for QP            |  |  |  |
| Start ~Stop Frequency | 1GHz~26.5GHz                              |  |  |  |
|                       | 1MHz/3MHz for Peak, 1MHz/3MHz for Average |  |  |  |

| Receiver Parameter    | Test Setting                   |
|-----------------------|--------------------------------|
| Start ~Stop Frequency | 9KHz~150KHz/RB 200Hz for QP    |
| Start ~Stop Frequency | 150KHz~30MHz/RB 9KHz for QP    |
| Start ~Stop Frequency | 30MHz~1000MHz/RB 120KHz for QP |

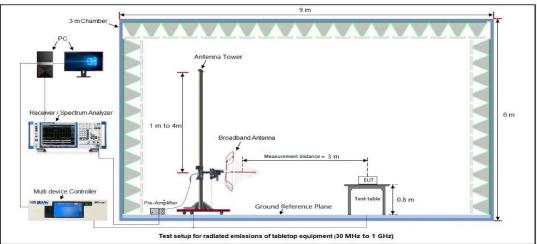


# 8.3 Measurement Setup (Block Diagram of Configuration)

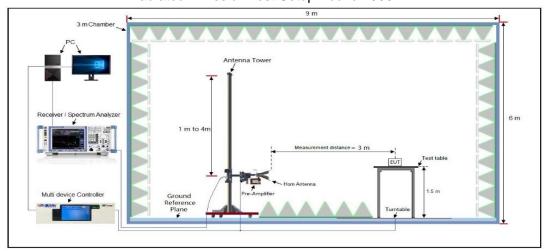
#### Radiated Emission Test Setup 9kHz-30MHz



# Radiated Emission Test Setup 30MHz-1000MHz



#### Radiated Emission Test Setup Above 1000MHz





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#### 8.4 Measurement Result

#### Radiated Emission from 9kHz~30MHz

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

#### Radiated Emission from 30MHz~1000MHz

| EUT Name      |  | Smart Bidet Toilet Seat Remote<br>Control | Model Name   | WLJ-O80KL            |  |  |
|---------------|--|---|--|----------------------|--|--|
| Temperat      | ure                                    | 23.2° C                                   | Relative Humidity  | 55.8%                |  |  |
| Pressure      |  | 960hPa                                    | Test Voltage   | Normal Voltage       |  |  |
| Test Mode     | е                                      | Mode 1                                    | Antenna  | Vertical             |  |  |
|               | 130<br>120<br>110<br>100<br>90         | FCC Part 15C                              | *  | Primary<br>Frequency |  |  |
| [m/x18b]jeven | 80<br>70<br>60<br>50<br>40<br>30<br>20 |   | I want with the same of the sa | January and January  |  |  |
|               |  | 100M Frequency[Hz] —— Horizontal PK       |  | 16                   |  |  |

| Suspected | Data L | ist_ Peak | Detection |
|-----------|--------|-----------|-----------|
|-----------|--------|-----------|-----------|

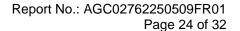
| NO.   | Freq.<br>[MHz]                      | Level<br>[dBµV/m] | Factor<br>[dB] | Limit<br>[dBµV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Polarity   |  |
|-------|-------------------------------------|-------------------|----------------|-------------------|----------------|----------------|--------------|------------|--|
| 1     | 216.24                              | 39.93             | 12.52          | 46.00             | 6.07           | 100            | 216.24       | Horizontal |  |
| 2     | 324.88                              | 38.37             | 16.89          | 46.00             | 7.63           | 100            | 324.88       | Horizontal |  |
| 3     | 433.92                              | 95.12             | 19.64          | 100.83            | 5.71           | 100            | 434.49       | Horizontal |  |
| 4     | 488.81                              | 39.60             | 20.70          | 46.00             | 6.40           | 100            | 488.81       | Horizontal |  |
| 5     | 650.8                               | 40.53             | 24.42          | 46.00             | 5.47           | 100            | 650.8        | Horizontal |  |
| 6     | 759.44                              | 41.42             | 26.53          | 46.00             | 4.58           | 100            | 759.44       | Horizontal |  |
| 7     | 868.08                              | 41.95             | 27.80          | 46.00             | 4.05           | 100            | 868.08       | Horizontal |  |
| Final | Final Data Result Average Detection |                   |                |                   |                |                |              |            |  |

| NO. | Freq.<br>[MHz] | PK Level<br>[dBµV/m] | Duty cycle factor(dB) | AV Level<br>[dBµV/m] | Limit<br>[dBµV/m] | Margin<br>[dB] | Polarity   |
|-----|----------------|----------------------|-----------------------|----------------------|-------------------|----------------|------------|
| 1   | 433.92         | 95.12                | -14.17                | 68.32                | 80.83             | 12.51          | Horizontal |

# **RESULT: PASS**

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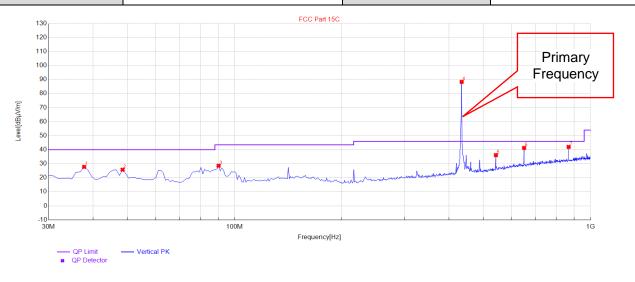
18.09

80.83

Vertical



| EUT Name    | Smart Bidet Toilet Seat Remote<br>Control | Model Name        | WLJ-O80KL      |
|-------------|---|-------------------|----------------|
| Temperature | 23.2° C                                   | Relative Humidity | 55.8%          |
| Pressure    | 960hPa                                    | Test Voltage      | Normal Voltage |
| Test Mode   | Mode 1                                    | Antenna           | Horizontal     |



# Suspected Data List\_ Peak Detection

| NO.                                 | Freq.<br>[MHz] | Level<br>[dBµV/m]    | Factor<br>[dB]        | Limit<br>[dBµV/m] | Margin<br>[dB]       | Height<br>[cm]    | Angle<br>[°]   | Polarity |
|-------------------------------------|----------------|----------------------|-----------------------|-------------------|----------------------|-------------------|----------------|----------|
| 1                                   | 37.76          | 27.76                | 14.39                 | 40.00             | 12.24                | 100               | 85             | Vertical |
| 2                                   | 48.43          | 25.75                | 14.34                 | 40.00             | 14.25                | 100               | 358            | Vertical |
| 3                                   | 90.14          | 28.55                | 10.91                 | 43.50             | 14.95                | 100               | 106            | Vertical |
| 4                                   | 433.92         | 88.37                | 19.64                 | 100.83            | 12.46                | 100               | 342            | Vertical |
| 5                                   | 542.16         | 36.16                | 21.96                 | 46.00             | 9.84                 | 100               | 357            | Vertical |
| 6                                   | 650.8          | 41.29                | 24.42                 | 46.00             | 4.71                 | 100               | 9              | Vertical |
| 7                                   | 868.08         | 42.01                | 27.80                 | 46.00             | 3.99                 | 100               | 266            | Vertical |
| Final Data Result_Average Detection |                |                      |                       |                   |                      |                   |                |          |
| NO.                                 | Freq.<br>[MHz] | PK Level<br>[dBµV/m] | Duty cycle factor(dB) |                   | AV Level<br>[dBµV/m] | Limit<br>[dBµV/m] | Margin<br>[dB] | Polarity |

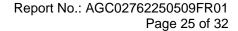
62.74

#### 1 433.92 88.37

**RESULT: PASS** 

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Limit-Level. .

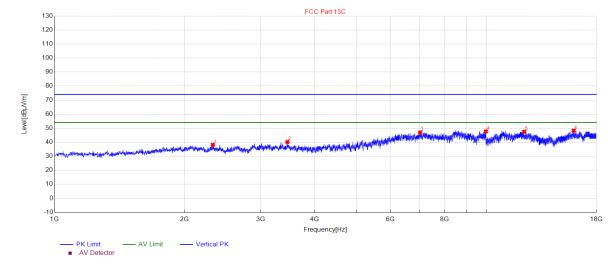
-14.17





#### **Radiated Emission from Above 1GHz**

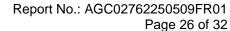
| EUT Name    | Smart Bidet Toilet Seat Remote<br>Control | Model Name        | WLJ-O80KL      |
|-------------|---|-------------------|----------------|
| Temperature | 23.2° C                                   | Relative Humidity | 55.8%          |
| Pressure    | 960hPa                                    | Test Voltage      | Normal Voltage |
| Test Mode   | Mode 1                                    | Antenna           | Horizontal     |



#### Suspected Data List\_ Peak Detection

| NO. | Freq.<br>[MHz] | Level<br>[dBµV/m] | Factor<br>[dB] | Limit<br>[dBµV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Polarity   |
|-----|----------------|-------------------|----------------|-------------------|----------------|----------------|--------------|------------|
| 1   | 2326.088406    | 38.16             | -13.15         | 74.00             | 35.84          | 150            | 190          | Horizontal |
| 2   | 3461.764118    | 40.19             | -11.19         | 74.00             | 33.81          | 150            | 170          | Horizontal |
| 3   | 7022.934862    | 46.93             | -3.55          | 74.00             | 27.07          | 150            | 300          | Horizontal |
| 4   | 9977.731849    | 47.74             | 0.79           | 74.00             | 26.26          | 150            | 190          | Horizontal |
| 5   | 12237.749183   | 47.51             | 2.82           | 74.00             | 26.49          | 150            | 60           | Horizontal |
| 6   | 15933.795586   | 48.20             | 5.67           | 74.00             | 25.80          | 150            | 270          | Horizontal |
| 7   | 2326.088406    | 38.16             | -13.15         | 74.00             | 35.84          | 150            | 190          | Horizontal |

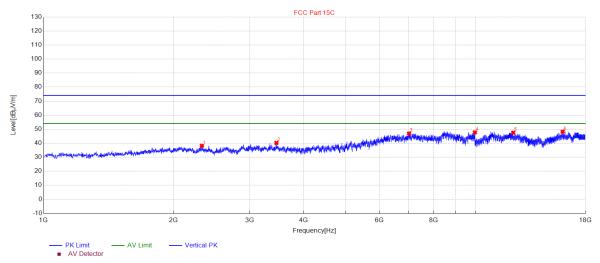
**RESULT: PASS** 





**Radiated Emission from Above 1GHz** 

| EUT         | Smart Bidet Toilet Seat Remote<br>Control | Model Name        | WLJ-O80KL      |
|-------------|---|-------------------|----------------|
| Temperature | 23.2° C                                   | Relative Humidity | 55.8%          |
| Pressure    | 960hPa                                    | Test Voltage      | Normal Voltage |
| Test Mode   | Mode 1                                    | Antenna           | Horizontal     |



# Suspected Data List\_ Peak Detection

| NO. | Freq.<br>[MHz] | Level<br>[dBµV/m] | Factor<br>[dB] | Limit<br>[dBµV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Polarity |
|-----|----------------|-------------------|----------------|-------------------|----------------|----------------|--------------|----------|
| 1   | 2326.088406    | 38.16             | -13.15         | 74.00             | 35.84          | 150            | 190          | Vertical |
| 2   | 3461.764118    | 40.19             | -11.19         | 74.00             | 33.81          | 150            | 170          | Vertical |
| 3   | 7022.934862    | 46.93             | -3.55          | 74.00             | 27.07          | 150            | 300          | Vertical |
| 4   | 9977.731849    | 47.74             | 0.79           | 74.00             | 26.26          | 150            | 190          | Vertical |
| 5   | 12237.749183   | 47.51             | 2.82           | 74.00             | 26.49          | 150            | 60           | Vertical |
| 6   | 15933.795586   | 48.20             | 5.67           | 74.00             | 25.80          | 150            | 270          | Vertical |
| 7   | 2326.088406    | 38.16             | -13.15         | 74.00             | 35.84          | 150            | 190          | Vertical |

# **RESULT: PASS**

### Note:

- 1. The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.
- 2. Factor = Antenna Factor + Cable loss Amplifier gain, Margin=Limit-Level.
- 3. The "Factor" value can be calculated automatically by software of measurement system.



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#### 9. -20dB Bandwidth Measurement

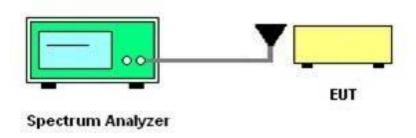
# 9.1 Provisions Applicable

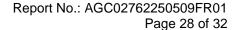
According to FCC Part 15.231(c), The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier

#### 9.2 Measurement Procedure

- Set the parameters of SPA as below:
- 2. Centre frequency = Operation Frequency
- 3. RBW=300Hz, VBW=1kHz
- 4. Span: 100kHz
- 5. Sweep time: Auto
- 6. Set the EUT to continue transmitting mode. Allow the trace to stabilize. Use the "N dB down" function of SPA to define the bandwidth.
- 7. Record the plots and Reported.

# 9.3 Measurement Setup (Block Diagram of Configuration)





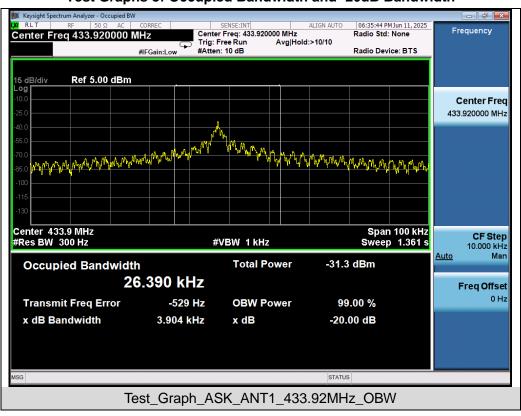


#### 9.4 Measurement Result

| Test Data of Bandwidth Measurement     |                       |                              |                          |                 |              |  |  |  |  |
|--|-----------------------|------------------------------|--------------------------|-----------------|--------------|--|--|--|--|
| Test<br>Mode                           | Test Channel<br>(MHz) | 99% Occupied Bandwidth (kHz) | -20dB Bandwidth<br>(kHz) | Limits<br>(kHz) | Pass or Fail |  |  |  |  |
| FSK                                    | 433.92                | 26.390                       | 3.904                    | 108.48          | Pass         |  |  |  |  |
| Note: Limit—Operation Frequency ×0.25% |                       |                              |                          |                 |              |  |  |  |  |

Note: Limit= Operation Frequency ×0.25%

# Test Graphs of Occupied Bandwidth and -20dB Bandwidth





#### 10. AC Power Line Conducted Emission Test

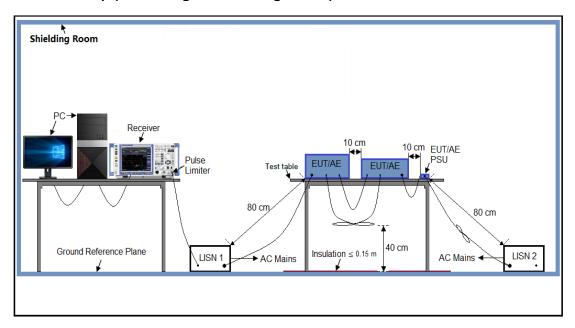
#### 10.1 Measurement Limit

| Fraguenay Dange | Maximum RF Line Voltage |                |  |  |
|-----------------|-------------------------|----------------|--|--|
| Frequency Range | Q.P. (dBµV)             | Average (dBµV) |  |  |
| 150kHz~500kHz   | 66-56                   | 56-46          |  |  |
| 500kHz~5MHz     | 56                      | 46             |  |  |
| 5MHz~30MHz      | 60                      | 50             |  |  |

#### Note:

- 1. The lower limit shall apply at the transition frequency.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

#### 10.2 Measurement Setup (Block Diagram of Configuration)





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#### 10.3 Preliminary Procedure of Line Conducted Emission Test

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipment received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received DC 5V power from adapter which received AC120V/60Hz power from a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

#### 10.4 Final Procedure of Line Conducted Emission Test

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported on the Summary Data page.

#### 10.5 Measurement Result

Not Applicable

Note: This device is battery powered, there is no AC power supply



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# Appendix I: Photographs of Test Setup

Refer to the Report No.: AGC02762250509AP01

APPENDIX II: PHOTOGRAPHS OF TEST EUT

Refer to the Report No.: AGC02762250509AP02



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# Conditions of Issuance of Test Reports

- 1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
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  3 The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of
- 3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
- 4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
- 5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
- 6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations. 7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
- 8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
- 9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

----End of Report----